



**BUTTERFLY &
Other
INVERTEBRATES CLUB INC.
NEWSLETTER**

ISSUE NO: 6

DATE: JUNE 1997

ISSN: 1236-0006

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AIMS OF ORGANISATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organise excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue - January 21st;

June issue - April 21st;

September issue - July 21st;

December issue - October 21st

COMMITTEE MEETINGS

A quarterly meeting is now being scheduled in order to plan club activities and the newsletter. The next meeting is being held on Thursday 28th August, 1997 at 7.30 pm at Terry Wolf's home. All members are welcome to attend. Please contact Helen for details.



EDITORIAL

We've been going now as a club for two and a half years. In that time we've had roughly one meetings or excursions per month, so we've kept pretty busy for a new club. Our newsletter has been getting good feedback, and we're appreciating it that members are writing in and contributing. We'd like to encourage more of you to do so.

So far there hasn't been much news about our application for funding of the Swallowtail poster, other than that we've been told that our application is being considered in this funding round, starting in April. It will stay in 3 rounds of funding, so we are still hopeful. In the near future we also plan to apply for funds from another source for a poster of the Nymphs of this region.

Since incorporating our club's structure has changed. We now have quarterly business meetings which are separate from our information meetings and excursions. All members are welcome to attend these meetings, which are listed in the program. We hope you will find this a better arrangement, but now that winter is upon us, things will be quieter on the invertebrate front. We hope you will join in the program planned for the next three months.

Helen Schwencke

IN THIS ISSUE

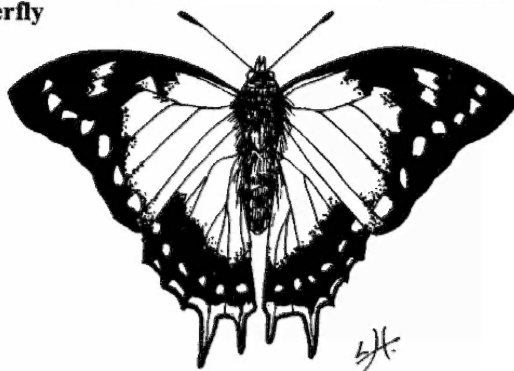
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CREATURE FEATURE

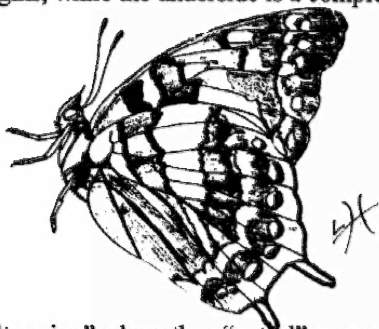
The Australian Tailed Emperor Butterfly

The Australian Tailed Emperor Butterfly (*Polyuria sempronius*) (Fabricius), was until 1982 considered to be a subspecies of the Papuan region's *P. pyrrhus* (Linnaeus). Lord Howe Island has its own subspecies, *P. sempronius tiberius*. Only one other related species (a *Charaxes*) occurs in Australia (on Cape York).



It has a wide distribution in Australia from Roebourne in the north west broadly around the coast and adjacent inland to Adelaide, where it first became established in the 1970's.

In the southern part of its range, its large size is matched only by the Orchard Butterfly (*Papilio aegeus*). This butterfly, sometimes called the "Four-tail" is truly magnificent in colour, form and flight. The upperside is cream with wide black, cream spotted margins, while the underside is a complex pattern of white, black and maroon patches,



bands and spots against a rusty-brown background with black hindwing spots externally edged in tan. As its name suggests it has four narrow, tapering and delicate extensions, two to each hindwing.

Its flight is a series of flaps and glides, covering long distances apparently effortlessly. Males exhibit a form of "hilltopping" where they "patrol" an area and from time to time land on a favourite perch. Adults usually settle high on foliage with wings initially spread open, but may close them soon afterwards. If perched lower down on trunk or larger branches they nearly always rest head down with wings closed.

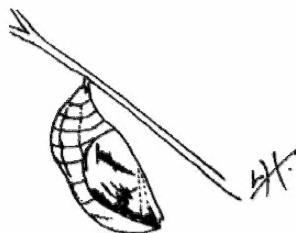
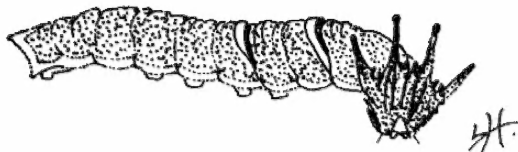
They are attracted to the juices of fermenting fruit e.g. overripe "Monstera" (*Monstera deliciosa*) or sap exuding from cracks in branches and trunks of trees e.g. "Jacaranda" (*Jacaranda mimosifolia*) is often favoured. Its larval food plants (= hostplants) include



many ferny-leaved wattles (*Acacia spp.*), some Abizias, Snow Wood (*Pararchidendron pruinosum*), Poinciana (*Delonix regia*) [all *Mimosaceae*], some Cassias and Sennas [*Caesalpinaceae*]; some *Celtis* species [*Ulmaceae*]; *Brachychiton* species including Flame Tree (*B. acerifolius*), Lacebark (*B. discolor*) and Kurrajong (*B. populneus*) [*Sterculiaceae*]; and Crepe Myrtle (*Lagerstroemia indica*) [*Lythraceae*].

In my garden it ignores the Flame and Lacebark Trees and prefers the Broad-leaved Bottle Trees (*Brachychiton australis*) as its host plant. This is also host to the Common Aeroplane (*Phaedyra shepherdi*), with larvae of both butterflies often found together.

The larval head bears two pairs of prominent tapering horns, and at the posterior end a pair of shorter pointed projections. The skin of the greenish body appears smooth but is covered with masses of minute white "granules", and has between 2 and 9 bluish-green and yellow dorso-lateral bands (more on the proximal segments) arranged like a series of narrow "saddles". [see illustrations]. The pupa is smooth, stout and a mottled cream on green colour, and hangs head downwards from the cremaster attachment at the tail.



The larva nearly always spins a silken pad as an attachment to its hostplant leaf, and sits in a way that is quite cryptic with its coloured bands matching the shapes, shadows and colours of the leaflets. On the *B. australe* leaf it positions itself with head facing towards the leaf attachment

(petiole), in a way whereby the four horns are accurately aligned along the four main lateral veins of the leaf. In this way it is extremely difficult to notice, although unfortunately the Noisy Miner birds have lately taken to finding them.

John Moss



EXCURSION REPORTS

RICHMOND BIRDWING OUTING 23rd FEBRUARY

We were greeted with a perfect fine and hot summer's day when we all met at Bob and Judy Miller's place at Landsborough.

After a "chat and a cuppa" we all headed off to the first site on the Stanley River. This



is an excellent area for butterflies and really set the tone for the day. We had excellent views of male and female Birdwings (*Ornithoptera richmondia*), Pencilled Blue (*Candalides absimilis*), Dark Orange Dart (*Ocybadistes heterobathra*), Macleay's Swallowtail (*Graphium macleayanum*), Capaneus (*Papilio fuscus capaneus*), Blue Triangles (*Graphium sarpedon*), Pearl White (probably Narrow Winged)

(*Elodina padusa*) and Common Aeroplane (*Phaedyra sherpherdii*) and perhaps the highlight - Australian Leafwings (*Doleschallia bisaltide*) ovipositing (or laying for we lay-persons!!) on *Pseuderanthemum Variable* -larvae were also found.

Food plants for all of these butterflies were also seen. In addition we were able to identify (with the assistance of John Moss) the Cicadas, Black Prince and Razor-grinder, calling.

We then moved on to Commissioner's Flat where we saw several of the aforementioned butterflies together with some Birdwing larvae though the numbers were significantly down on last season. A feature of this area was the large number of Grass Yellow (*Eurema hecabe*) butterflies.



Australian Leafwing



We were then privileged to be able to visit June Wimberley's garden in Beerwah. June has extensively planted her garden with host plants and is certainly reaping the rewards.

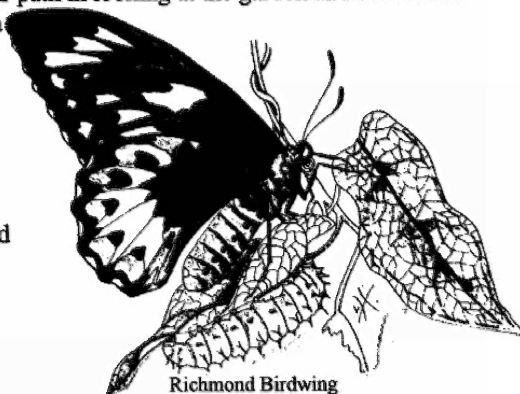
Lemon Migrants (*Catopsilia pomona*), Zebra Blues (*Syntarucus plinius*), Grass Yellows (*Eurema hecabe*), Six lineblues (*Nacaduba berenice*), Common Eggflies (*Hypolimnastis bolina*), Wanderers (*Danaus plexippus*), Orange Palm Darts (*Cephrenes augiades*), Yellow Banded Darts (*Ocybadistes walkeri*), Pale Darter (*Telipotia colon*) and Blue Triangles were just some of the species sighted and Brown Bunyips and Paperbark Cicadas were heard calling in the Garden. June also showed us some excellent photos of butterfly life cycles.



Blue Triangle

June was keen on us following a particular path in looking at the garden and the reason was revealed when we reached the end, a magnificent display of Sturt's Desert Peas in flower which were growing in seemingly ideal conditions in a crushed gravel mix.

Our successful day so far had put us somewhat behind schedule and we arrived at Arthur and Narelle Powter's later than anticipated.



Richmond Birdwing

Arthur showed us over his wonderful rainforest property and we were lucky enough to witness a pair of Birdwings in mating flight together with eggs and a final instar larva.

Among other sightings we also added the following to our list - Orchard Butterfly (*Papilio aegeus*), Speckled Lineblue (*Catopyrops florinda*), Small Green-Banded Blue (*Danix hymetus*), Hairy Lineblue (*Erysichton lineata*), Large Darter (*Telipotia anisodesma*), Pale Green Triangle (*Graphium eurypylus*) and a new species for many of us, the Eastern Brown Crow (*Euploea tulliolus*). We also heard Floury Bakers and an (as yet) unnamed cicada from the *Psaltoda* group calling in the trees above.



By this time we were all hot and weary and made short work of the cold water and delicious cold fruit Narelle had waiting for us.

Back to Bob and Judy's for a late lunch where we added Large Dingy Skipper (*Toxidia peron*) and Dingy Ring (*Xoia arctoa*) among others (though Bob and Judy's hospitality was far from "dingy"). Cicadas calling included Black Tree Tickers, Small Bottle Cicadas and *Pauropsalta corticinus*.

With the major part of the day now over members headed in different directions - some to have a swim to keep the kids happy - while a few of us made a quick trip to the Log Cabin where the icing was added to what was already a very fine cake.



Regent Skipper

We were able to observe larvae, pupa and adult of the Regent Skipper (*Euschemon rafflesia*) which was a special treat. We also saw more Birdwing larvae and a pair of Common Aeroplanes flying close to the ground.

We then made our way home and as we dropped off Lois at West Mt. Cotton we were treated to a lone Cherry Nose Cicada calling from the rainforest and Bladder Cicadas setting the seal on a wonderful day.

Once again, thanks to Bob and Judy, June and Arthur and Narelle.

Rob MacSloy

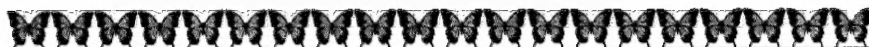
FRESHWATER EXCURSION TO STONY CREEK, SUNDAY, MARCH 23RD, 1997, led by Jon Marshall

The excursion set out on a rather overcast day, with threatening rain. After a short walk to meet the creek, our first encounter of the wildlife kind was with a water snake, which made quick its departure. A little later we found a Stony Creek frog (*Litoria lesueuri*), what better place to find one! From then on the only wildlife we encountered was of the spineless kind we'd come to see.

Arthropods

Several beetles and bugs which live predominantly in the water or on the surface were sighted.

The first freshwater insects we spotted were pond skaters (Hemiptera : Gerridae). These creatures live on the surface of the water using water tension to stay above water



and vibrating their feet to communicate with each other. Different species use different frequencies of vibration.

Whirley gig beetles (Coleoptera : Gyrinidae) were also common. These beetles are predators of insects that fall in the water. They can also dive under the water. They have an unusual feature in that their eyes are divided so that they can see above and below the water line at the same time.

A curious bug which swims upside down, the water boatman (Hemiptera : Notonectidae) and another bug the Corixid bug were also sighted.

A beetle larva, called a water penny (*Sclerocyphon striatus*, Coleoptera : Psephenidae) was found clinging to rocks. These larvae eat diatoms (algae) which live on rocks.

Dragonflies and damselflies

Several dragonflies and damselflies were sighted. These included:

Diaphlebia sp. (Amphipterygidae) - a damselfly with looks like a dragonfly in the way its wings are positioned, males were sighted. They are bright blue and black.

A red dragonfly in the family Corduliidae, a copper orange damselfly (*Austroargiolestes chrysoides*, Megapodagrionidae) and a lime green and brown dragonfly of the genus *Austroaeschna* (Aeshnidae) were also sighted. No larvae were found.

Mayflies and Caddis flies

Larvae of two species of mayfly were found. One was from the family Baetidae (*Bungona* sp.), the other, (*Atalophlebia* sp.), of the family Leptophlebiidae. The larvae of mayflies are quite distinct with three prongs protruding from their tails. When metamorphosing into the adult mayfly, these creatures emerge from the nymph stage as a subimago. At this stage it is winged and looks like an adult. This stage lasts for \pm 1 day and then moult again into an adult.

A group of adult Caddis flies was found flying around and settling on rocks in the creek. Two species of larvae were found in the creek. The larvae of one species (*Tasiagma* sp., Trichoptera : Tasimiidae) build a stone case which is long thin and tapered in which to spend their larval stage. The larvae of the other species (*Agapetus* sp., Trichoptera : Glossosomatidae) build an igloo shaped shelter. When pupating the larvae of these two species cement their stone cases to the rocks. They emerge from the pupal stage as pharate, which has big jaws for breaking out of the case. This stage then moults into the adult caddis fly.

Crustaceans

Two species of crustaceans were found in the tributary off the main Stony Creek, where the canopy was fairly closed over the creek. Numerous glass shrimps (*Paratya australiensis*, Decapoda : Atyidae) were caught. A Spiny crayfish (*Euastacus hystricosus*, Decapoda : Parastacidae) was also spotted. These can grow to weigh several kg's. but take decades to reach such proportions. Another species of shrimp and two species of crayfish are known to live in the stream, but did not make themselves available to us.



Arachnids

In the small tributary of Stony Creek, where the canopy was closed over the stream and the rocks and boulders were larger with more overhangs, many spiders (Araneae : Pisauridae) were found. These spiders can run across the water and sit on the water surface to find prey.

Molluscs

A small snail of unknown species (Gastropoda : Hydrobiidae) was found on a rock lifted from the water. This family of freshwater snails includes many species with very restricted distributions.

Platyhelminths

Temnocephalids were sighted living on the outside of a crayfish. These small animals are related to flatworms. They look like tiny rubber gloves and feed on small animals disturbed by the crayfish as it moves and feeds. They generally cause no harm to their crayfish host although they can occur in very large numbers.

Annelids

An unidentified worm, resembling an earthworm was found swimming in a small pool in the open part of the creek.

Non-aquatic invertebrates sighted

A male Albatross, Common grass yellow, male Orchard swallowtail, Blue triangle and Australian rustic were sighted. Also a moth which mimics the Regent skipper was sighted along the water's edge.

Other interesting features

We found a patch of oily film on the surface of a small pool with areas which were rust coloured. This phenomenon is caused by iron reducing bacteria. These bacteria derive their energy from the chemical bonds of the iron, and secrete rust particles as waste. Leaf litter forms an important food source for aquatic invertebrates, which are divided into functional groups to help define their ecological role. These groups are shredders, collectors and grazers. Shredders feed on leaf litter. As their name suggests, they break the leaves into smaller fragments. Collectors utilise these small fragments of organic matter, while grazers feed on algae growing on the rocks. Then of course there are predators which eat all the other groups.

Our thanks goes to Jon Marshall for leading this fascinating excursion.

Compiled by Helen Schwencke
in collaboration with Jon Marshall



CREATURE NOTES

Creature Note #3

A host plant for the Indigo flash (*Rapala varuna*)

In recent weeks we found an odd looking small caterpillar on our Milla Milla (*Elaeagnus triflora*). It most resembled the larva of a cupmoth, with rows of short protrusions along its body. So we brought it inside and fed it for another day or two before it changed colour from mostly greenish to pinkish. We expected it to make a cup. However, it crawled off the plant and onto the bottom of the cage. After locating it again, and placing it back on the food plant, it pupated directly on the leaf. Several days later, much to our surprise, a dark lycaenid butterfly emerged. It was quite distinctive, and easily identified from Common and Waterhouse's book as an Indigo flash. This identification was confirmed by Murdoch DeBaar.

Upon inspecting the plant some days later, we discovered many more larva. Closer inspection revealed very small fresh turquoise eggs at many leaf nodes, next to the flower buds. The emerging larva were eating the flower buds first then moving onto the leaves as very small larvae. The fresh young leaves were preferred to the older ones until they were all eaten out. As all the flower buds have been consumed and young leaves are now scarce, fewer of the young larvae can now be found.

Creature Note #4

A host plant for the Small grass yellow (*Eurema smilax*)

When Frank brought home two small *Senna acclinis* plants from a rainforest nursery they were playing host to three small green larvae which closely resembled Common grass yellow caterpillars, though they were paler, and with a dark green stripe down their backs, we decided to rear them through to see what they were. Our efforts were thwarted when each became a small white cocoon with black blotches, resembling bird droppings. In time three wasps emerged.

Fortunately, the plants still carried two unhatched eggs at the time they were brought inside. These duly hatched, grew, moulted and pupated at a much smaller size though still very similar to a Common grass yellow larvae. A week later we were rewarded with the emergence of a male Small grass yellow and on the following day a female.



Creature Note #5

A host plant for the Six lineblue (*Nacaduba berenice*)

While visiting a creek bank at Nambour, Frank found some small lycaenid larvae on the flowers of an elm, *Aphanthe philippinensis*. Ever curious as to which species they were, we collected a number to breed. Once the flowers were eaten, they moved onto the leaves. However, shortly after they pupated at a small size. The small butterflies which emerged were difficult to identify from Common & Waterhouse. They were identified from photos as Six line blues by Murdoch DeBaar.

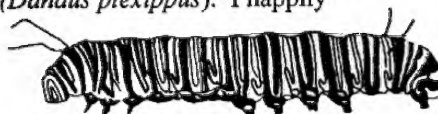
Helen Schwencke & Frank Jordan

LETTERS

Here is another of those delightful anecdotal records of Lois Hughes.

Will the Lesser Wanderer please stand up!

My first experience with raising caterpillars came about by accident. I had picked a stalk from the white flowered milkweed to paint its flowers. It took several days to complete and as I sat at the table I realized I wasn't alone, the fine "dirt" I had noticed, evidence of a tiny striped Wanderer caterpillar (*Danaus plexippus*). I happily discovered another egg, ready to hatch and was so entranced I became their willing slaves and they kept me busy replenishing their food supply and cleaning their mess. Of course more eggs and tiny caterpillars arrived with each fresh batch of leaves. Most of these I returned outside after they had grown to a movable size, keeping just four ever expanding "originals". They are such plodding, cumbersome creatures, loving to spend their "non-eating" hours just resting on table legs or the floor, so I had to be extra careful where I walked! One of the "four" seemed a bit different but I didn't look closely, as by this time I was also raising Australian Admirals (*Vanessa itea*) and they varied greatly, so I just assumed that these varied also.



Wanderer



Front



Back end

The first three all wandered off on the same day, in preparation for pupation, so I transferred them to a mesh food cover where they happily hung, after several days. It certainly was very difficult at first to judge whether they were just going for a stroll or seriously contemplating a change of lifestyle! I was quite annoyed to discover the "different" one had also gone missing, because it had never moved off the plant as the

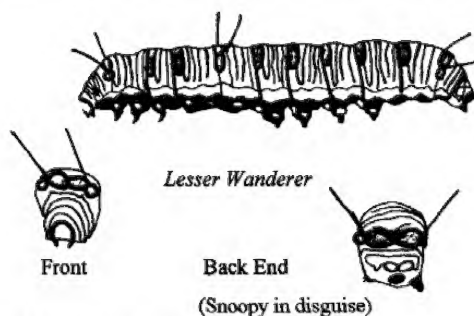


others had and I hadn't expected that behaviour as it was only about ¾ the size of the others. I thought it must have been lonely without the others. Well, I'm pretty new to all this! (Horses hate to be left alone and will always seek company.) My search for it proved fruitless and it wasn't until a couple of weeks later that I discovered the chrysalis hanging under the edge of the desk. It looked the same as the Wanderer, a pale green colour with gold dots and a yellow and black line around the top section.

My most memorable experience came as I watched a suspended caterpillar begin rhythmic contractions and the now redundant caterpillar skin split near its head and be slowly shrugged up and off, discarded like an unwanted garment. Beneath was the pale green colour of the chrysalis, still caterpillar shaped. The contractions continued until it was compacted into the chrysalis shape. WOW! That was really neat!!! And to see it darken, after several weeks, and watch this butterfly burst out, with large body and tiny folded wings, the markings in miniature, hanging till its veins slowly filled and wings hardened, was a deeply moving, spiritual experience. To know it went in as an earth-bound leaf eating caterpillar and emerged as a nectar drinking, free-flying butterfly had just demonstrated to me the awesome power of creation, each detail proceeding to a pre-ordained plan. Metamorphosis is certainly incredible.

The newly emerged butterfly sat for three hours while I completed my painting, then trustingly crawled onto my finger to be released. It was in no hurry to begin its new life but sat for several more hours in the sun. A few days later a fluttering movement on the floor caught my eye and there was my "different" butterfly, an absolutely gorgeous Lesser Wanderer (*Danaus Chrysippus*). I have now painted it also, but on a red flowered milkweed.

It took me several weeks of searching the milkweeds to find the Lesser Wanderer caterpillar. I can't believe I hadn't noticed how very "different" it was. It's taught me to be more observant.



I have to smile when my husband says he's left the milkweeds grow, now. He used to consider them a real pest and unchecked they can be. He seems to be becoming as fascinated by our "house guests" as I am, which is just as well because my fascination continues to grow. Hope yours does too. Who needs T.V. when you can watch a butterfly emerge.

Lois Hughes



The following is an extract from the Queensland Naturalists' Club Inc. Newsletter, May-June 1997 written by John Moss reporting on an excursion in April this year to "Bindaree", Miriam Vale.

"As far as the insects were concerned, the numbers of both species and individuals were low, as evinced by the relatively few moths, beetles and other nocturnal insects coming to the light-trap set one night in the riparian rainforest vegetation beside the river. The presence of large numbers of very fat toads may partially explain this paucity for insects.

Of those found, however, the butterflies stood out and 37 species were recorded, of which the pretty Orange Bushbrown was the most common. The Eastern Brown Crow replaced the Common Crow butterfly at this time and we marvelled at the purple sheen on its wings as it turned in the direct sunlight. Its host plant, Burny Vine (*Malaisia scandens*) was present along the creek and river gullies. The Creek Sandpaper Fig (*Ficus coronata*) was playing host to the tiny Common Moonbeam as etchings of the larvae were seen on many leaves. On looking closely, both larvae and pupae were seen perfectly camouflaged, looking like parts of the leaf. A few adult butterflies were also seen on the wing, as well as the equally pretty Speckled Lineblue and Small Green-banded Blue.

By far the most interesting butterfly found was the nymphalid Brown or Chocolate Soldier, a relative of the Meadow Argus and Painted Lady, which once used to be common around parts of Brisbane where its acanthaceous host plant, was found. Because of flood mitigation and general resumption of land for development, the host plant has become scarce and the butterfly now is only occasionally collected south of Rockhampton. We found it ovipositing on *Persicaria hydropiper* (a member of the *Polygonaceae*) growing in the sand along the edge of the river. There did not appear to be any *Hygrophila* present, and it is not known whether the larvae will go through to adulthood on this plant.

The presence of the hesperiid, the Black and White Flat was noted. One specimen only of this large skipper was seen along the dry creek bed. This species, which feeds on native yams (*Dioscorea sp.*) is slowly extending its range southward, in contrast to the previous species. Very few other skippers were seen, possibly the drought being a factor.

Amongst the other insects the Razor-grinder Cicada (*Henicopsaltria eydouxii*) stood out, both due to its loudness and uniqueness, it being the only species present of a group of mainly summer insects. This location was worthy of note as being about 60 km north of its previously recorded northern limit. There were many exuviae



(discarded nymphal shells) of other species, showing us that a summer visit would be most rewarding."

Summary of butterflies observed at "Bindaree" compiled by Ronald Moss (age 6) - Blue Triangle, Pale Green Triangle, Orchard Swallowtail, Common Jezebel, Northern Jezebel, Common Albatross, Australian Gull, Lemon Migrant, Yellow Migrant, Common Grass Yellow, Blue Tiger, Wanderer, Lesser Wanderer, Common Crow, Eastern Brown Crow, Meadow Argus, Painted Lady, Chocolate Soldier, Australian Rustic, Australian Leafwing, Common Aeroplane, Orange Bushbrown, Common Brown Ringlet, Orange Ringlet, Northern Ringlet, Dingy Ring, Evening Brown, Glasswing, Common Moonbeam, Small Green-banded Blue, Speckled Lineblue, Common Grass Blue, Pea Blue, Dark Orange Dart, Black and White Flat, Symmymous Skipper, Pale Darter.

The following is an extract from the same Newsletter also by John Moss reporting on an excursion to Tingalpa Creek on April 20 by QNC and Redlands' environment groups.

"Among the vines and creepers were large specimens of the Common Silkpod (*Parsonia stramineus*); the large-leaved *Legnophora moorei*; and various other native grapes (in the *Vitaceae*) including *Cissus antartica*, *C. hypoglaucia*, *C. opaca* and *Cayratia clematidea*. The Prickly Snake vine (*Stephania aculeata*) was common as was *Morinda jasminoides* with its domatious leaves and dark orange grape-sized fruit. On the rainforest floor were many juvenile specimens of the Native Yam (*Dioscorea transversa*). Whipvine (*Flagellaria indica*), the only known host plant of a rare skipper butterfly (the Large Darter), was forming impressive curtains and canopies above its cane stems, and in spite of the relatively dry conditions, appeared to be producing new growth. This augurs well for the butterfly which has been seen here only rarely. It was difficult to know for certain whether we were looking at Blood Vine (*Austrostenisia blackii*) or Native Derris (*Derris involuta*) without taking to it with a hatchet (we didn't!); and did we really see Forest Clematis (*Clematis glycinoides*) or was it Soft Jasmine (*Jasminum singuliflorum*)? It looks like yet another visit to be sure!

Amongst other butterfly host plants we found the Love Flower (*Pseuderanthemum variable*) favourite of the Australian Leaf-wing, seen here previously; the Crows Ash (*Flindersia australis*) and Sandfly Zieria (*Zieria smithii*) both carrying many larvae of the Orchard Swallowtail butterfly. The characteristic epidermal chewings of the Common Moonbeam butterfly were seen on the leaves of many Creek Sandpaper Figs (*Ficus coronata*) with similar evidence for the Small green-banded Blue butterfly on the leaves of Pink Ash (*Alphitonia excelsa*), with only the later butterfly in evidence this day; and most exciting of all, we found a spent pupal shell of the magnificent



Regent Skipper butterfly between two sewn leaves of its local host plant, *Wilkiea huegeliana*. Three specimens of this rather restricted butterfly were seen by Jim, Johnston, Rosalie Eustace and the writer on one of our pre-excursion recces - a first record for the Redlands! It most likely will be present all along this creek system where the *Wilkiea* is found."

TEACHING TIPS

KEEPING AND REARING STICK INSECTS

by Mike Groth

Stick insects or phasmids are relatively easy to keep as live specimens. They make interesting pets and by rearing them one can get an insight into their life cycle and habits. Watching a stick insect shed its exoskeleton to progress to it's next stage of growth is quite remarkable.

There are over 100 different kinds of phasmids in Australia. The three species *Eurycnema goliath* (Goliath Stick Insect), *Acrophylla titan* (Titan Stick Insect), and *Extatosoma tiaratum* (Spiny Leaf Insect), are probably the most common ones encountered in South East Qld. and the following suggestions for keeping stick insects are based on experience in rearing these three species.

The adults and nymphs of stick insects can be kept in a 'cage' with three sides made from clear perspex or PVC (available from Mulford Plastics, Coorparoo), base from melamine coated particle board, the fourth side a removable or hinged door made in the same manner as a flyscreen for a window and the top of the cage can be either perspex or fly screen. This combination seems to give ventilation but still retain suitable humidity levels. If only one or two adults are being kept then dimensions of around 300 mm x 300 mm and 400 mm high would be suitable. Dimensions of around 500 mm x 500 mm and 700 mm high would be suitable to keep several adults and ten to twenty nymphs.

The Goliath stick insect can be fed on various species of Eucalyptus. One that is taken readily and common in Brisbane is *E. torelleana*. Other species which I have fed them on are Stringy Bark and Black Butt common up here at Crows Nest. The young nymphs of the Titan stick insect seem to prefer Black wattle, *A. decurrens* whilst later instars and adults feed readily on the same Eucalypts as listed for Goliath. The Spiny Leaf insect is often reared on Black wattle (*A. decurrens*) but I have successfully reared them completely on Black Butt (*E. pilularis*).

To rear nymphs or adults, cuttings of the food plant are placed in a suitable container with water in the cage and the insects placed on the foliage. A daily misting of the



foliage with water will help to keep the cutting fresh and provide some drinking water for the insects. Adults particularly can be observed drinking water collected on leaves or the cage sides. The cuttings should be changed as often as necessary to keep them reasonably fresh. In summer this may be every three days or so but in winter cuttings may last up to a week or more.

The eggs are laid by the female while she is hanging in the foliage and just fall to the ground (or the bottom of the cage). The Titan stick insect particularly has the habit of flicking the egg aside as it is laid presumably to scatter the placement of the eggs so they are less likely to be found by predators. The eggs are laid singly, one or two a day over a few months and accumulate along with frass (insect poo) and dead leaves on the bottom of the cage. The debris from the bottom of the cage which consists of frass, dead leaves and eggs from the bottom of the cage is placed in an old aquarium measuring about 300 mm x 400 mm and 250 mm high. The whole lot is given a misting with water and a bit of perspex placed on top to maintain humidity and stop nymphs (baby stick insects) from escaping. Additional lots are added till the container is about half full. If the frass etc feels just moist it's about right. All that is required now is to wait and wait. Patience is needed because some eggs may take a few months, six months or a year to hatch. I have had some Titan eggs hatch after two years. When the baby stick insects (nymphs) hatch and appear on the side or lid of the container place them in the cage on the foliage with the others. The easiest way to pick them up is to encourage them onto a twig or leaf. They aren't cannibalistic so the big ones won't eat the littlies. Fatalities are inevitable. Some will just die without starting to feed, some die for no apparent reason at various stages of development. Rough handling of the nymphs may cause them to lose a leg, so be gentle. If a leg is lost during the early instars (they go through five or six) the nymphs can regenerate the limb but it will be smaller than the others.

Nymphs take about six months or more to reach the adult stage and the adults can live for another six months or more.

Much is still to be learnt about the habits, food plants accepted and the effect of different food plants on lifespan, growth etc of even the commonest species. Even to be kept as an interesting pet these amazing insects can allow us to learn much about basic insect structure, habits and life cycles.

(Mike Groth, who conducts an insect show for schools called "Amazing Insects", has kindly compiled this article for us. If you wish to contact Mike regarding a school visit please phone him on 076 981949.)



World Wide Web sites to Watch

In the last issue of our newsletter we began this column. More and more information is becoming available on the Internet, and some good invertebrate sites are among them. Hopefully, in time, we'll have our own information available on this medium.

The Australian Magazine ran an article in the 17 - 18 May issue in the gardening section by Cheryl Maddocks on an organisation called "Flora-for-Fauna". The founder, Jill, Du chess of Hamilton, was in Australia recently and was encouraging the nursery industry to become involved in butterfly conservation.

Flora-for-fauna has an extensive website. The home page, titled "FLORA-for-FAUNA: Growing Garden Plants to Help British Wildlife" is at <http://www.bbk.ac.uk/flora>

The site covers an

- introduction to the idea of growing plants to support various types of fauna, including butterflies,
- the objectives of the organisation,
- various articles about growing plants for wildlife, including one for butterflies and moths,
- information on initiatives, such as the Butterfly Banquet Scheme for Councils, and
- a searchable database on Animals covering habitats, diet, predators and distribution; Plants covering a list of plants that are suitable for wildlife; and Lower plants.

While the site is still under development (will it ever not be!) and is specific to British plants and animals, it is interesting to see what has and can be done via the Internet to promote butterfly and other conservation issues.

PUBLICATIONS

THE VICTORIAN BUTTERFLY DATABASE

Fifty-five years ago two Victorian boys began collecting butterflies as a hobby. The individual hobbies became a collective passion and the boys became life-long friends. Their butterfly collections, and with them their knowledge of butterflies, grew enormously over the years and David Crosby and Nigel Quick came to be regarded by many as the best butterfly field-biologists in Victoria.

Along the way Nigel became a proficient botanist and an authority on the food plants of Victorian butterflies, while David discovered and described the rare Eltham Copper



butterfly, which later became the focus of the largest conservation program ever mounted for a Victorian invertebrate species.

The database on the CD contains distribution data from the collections of the Museum of Victoria as well as information from David and Nigel. An indication of how prolific the two have been as collectors is shown by the fact that their records account for 80% of the database while those from the Museum of Victoria constitute the remaining 20% - all of this despite the fact that neither man has ever worked as a professional biologist.

The user of the Victorian Butterfly Database will be able to investigate every species of butterfly recorded for the State, view full colour photographs and concise descriptions of every one, determine their conservation status (assigned to each species by David Crosby), their food plants and the environments in which they are found. It is an authoritative, up to date and complete reference on butterfly distribution and taxonomy which it is believed will become a standard reference for serious and casual students of the Victorian natural environment.

Victorian Butterflies on CD-Rom is available from Viridans Pty.Ltd., Suite 4, 614 Hawthorn Road, Brighton East, Vic. 3187 at a cost of \$123 including postage and handling.

BUTTERFLY VIDEOS

These videos are available from E.W. Classey, Bookseller, London.

They also produce a catalogue of both new and out-of-print books, as well as antiquarian books on all groups of insects. John Moss receives their catalogue regularly and you are welcome to peruse it at our meetings or contact him if you are after a particular book that you are finding hard to get.

"Beauty for Survival"

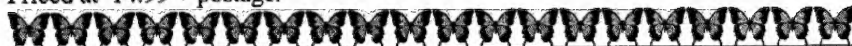
The first in a series of Butterfly videos professionally produced by John Banks "Cinebutterflies". 30 minutes. Over 60 live species from Europe, India, Malaysia, Latin America and Australia filmed in their natural habitat and showing how the butterfly's appearance increases its chances of survival.

Priced at 9.99 + postage.

"Diversity in the Rain Forest"

Cinebutterflies second video. 50 minutes of the amazing butterflies of Peru, filmed at the unique Tambopata Reserve on the western edge of the Amazon basin.

Priced at 14.99 + postage.



"Puzzles of the Past"

Probing the History of Europe's Butterflies. Over 75 species in vivid close-up. This 35 minute video raises some of the fundamental questions about the history and geography of our butterflies.

Priced at 14.99 + postage.

The Ulysses Butterfly - a Life Cycle

This 30 minute video follows the fascinating life cycle of the Ulysses butterfly, a tropical species found in the rainforests of North Queensland, Australia. All stages of the life-cycle are shown in close detail for the first time. Predators of the caterpillar, plus the egg laying, feeding and mating behaviour are also shown.

Priced at 19.97 + postage.

The Cairns Birdwing Butterfly

This video is soon to be released but we do not yet have details.

Attracting Birds and Butterflies - Everything you ever wanted to know - Due for release late 1997/early 1998. A Zodiac Publication, P O Box 210, Tolga Qld. 4882. (Colleen Keena found this on the internet at web site <http://www1.tpgi.com.au/users/zodpub> -thank you Colleen.)

OTHER GROUP'S ACTIVITIES

Redland Shire Council Bushcare Family Fun Day - Sunday, 20 July

The Butterfly and Other Invertebrates Club has been invited by Redland Shire Council's Native Conservation Unit to have a stall or billboard relating to our Club's activities on this day. Our Committee of Management will be arranging an informational display and may have host plants available for sale.

The event will take place at the Training Room at the South Street Depot from 1pm to 6.30 pm. From 1 - 3 pm there will be Group Activities - Afternoon tea - 3.30 - 5 pm Bush Care Groups Reports - 5 - 6.30 a Barbecue.

All Club members are welcome to attend.



LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson

Butterfly Magic, by Helen Schwencke and Frank Jordan

Australian Cicadas, by Max Moulds

Butterflies of Australia, by Common and Waterhouse, 1981

Butterfly Watching, by Paul Whalley

ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents". Have YOU advised Rob of the host plants you have available?



BUTTERFLY AND OTHER INVERTEBRATES CLUB INC. PROGRAMME

When: Monday, 16th June, 1997, 7.30 pm
What: Don Sands is address the Queensland Naturalists Club on the ecological relationships of birdwings
Where: Queensland Museum Auditorium
Contact: John Moss, 3245 2997

When: Sunday, 17th August, 1997,
What: Enviromania '97
Where: Eprapah Environment Centre, cnr Cleveland/ Redland Bay Rd.,
Victoria Point
Details: The Friends of Eprapah - Scout Fellowship have invited us to set up a stall, and promote butterfly gardening at this event. Club members are welcome to attend and see the displays.
Contact: Helen Schwencke, 3844 6677

When: Thursday, August 28th, 7.30pm
What: Dr. Kris Plowman will talk to the club about Ants, this meeting has been postponed from May. Kris conducted workshops about Ants for Brisbane Forest Park
Where: Runcorn State School, Staff Room, cnr Mains & Beenleigh Rds., Runcorn, parking is available in the grounds off Mains Rd or in Ardgie St.
Contact: Helen Schwencke, 3844 6677

When: Thursday, 7th August, 1997, 7.30pm
What: Committee Meeting, all welcome, please contact Helen for details
Where: Terri Wolf's place
Contact: Helen Schwencke, 3844 6677

If there is a particular speaker you wish to hear or a particular event you wish to attend, it would be wise to phone the contact for that event in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.



MEMBERSHIP FORM

Name: _____

Address: _____

Suburb/ Town _____ State: _____ Postcode: _____

Phone: _____ Fax: _____ Email: _____

If you are employed in a relevant occupation, or have a specific area of expertise,
please specify the occupation and organisation: _____

If you have are subscribing on behalf of a School, please specify which School:

If you have a specific area of interest, please specify: _____

I have enclosed a cheque / money order for -- please specify which membership /
subscription type:

☐ \$10.00 Individual / School ☐ \$15 Family
made payable to **Butterfly and Other Invertebrates Club Inc.**



ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those who sent in letters and articles
- Lois Hughes who provided illustrations
- Daphne Bowden who works on layout, production and distribution
- Steve McGoldrick who works on production and layout
- Georgina John who works on editorial content and helps with design
- Helen Schwencke who developed the overall design and works on content
- Lois Hughes who developed the cover design
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2041
Runcorn Q 4113

NEXT MEETING:

Monday, 16th June, 1997, 7.30 pm
Queensland Museum Auditorium



